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THE FAT AND THIN OF IT

Fat men endure high temperature and humidity better than thin men. In experiments to determine the relative effect of various temperatures and humidities on the human body, scientists found that sweat is the chief factor causing sore eyes when a person becomes heated.

Another common belief was blasted during the experiments when it was found that the drinking of ice water failed to develop cramps in the men after they had been subjected to an hour's exposure to high temperature.

The object of the research work is to establish, by scientific study, the exact degree of temperature, and of humidity, or "comfort lines" a person should be subjected to in a room. The problem was first attacked several years ago, and the research work has now reached a point where definite results have been obtained. The first experiments have been to study the physiological effects of various temperatures and humidities on human subjects at rest in still air.

One of the important results of the experiments was the discovery of the great variations of external temperature which the human being can endure, and at the same time, retain his physiological efficiency. Another fact discovered was that increasing pulse-rate is more the cause of discomfort than is body temperature, when in a heated room.

In a report of the experiments, just issued, are these assertions: "While irrelevant to the present study, an attempt was made to determine the cause of the inflammation of the eyes, and also to find out whether or not the drinking of ice water produces cramps, as so frequently complained of by workers in the industries.

"On a day when the eyes were normal, a small quantity of sweat which had been collected during an experiment, was dropped in the eye. The conjunctiva almost immediately became inflamed and the eye felt sore. The sweat collected from the face

seemed less irritable to the eye than that collected either from the chest or arms. Sweatbands were then applied to the forehead during the experiments, these preventing the sweat from falling into the eyes, and also prevented the inflammation. This proves sufficiently that the sweat is the chief factor in producing the conjunctivitis which accompanies exposure to heat.

"It has frequently been stated that workers exposed to high temperatures developed severe cramps after drinking ice water. A few of the subjects of these experiments volunteered to drink ice water after about an hour's exposure to high temperature, and two of them, in one experiment, drank a quart of ice water in less than 15 minutes without ill effects. Cramps did not develop in any of the subjects at any time."

On entering and leaving the specially heated chamber, the report shows, loss of weight varied with the individual, the heavier and stouter man losing more than the light and thin one. Notwithstanding this, the lighter man as a rule could not endure the temperature conditions as long, and complained more of the exhaustion which followed.